

REMARKS

This request for reconsideration responds to the Official Action dated March 18, 2011. Claims 31, 32, 35, 37, 39, 40, 47, 53, 62-64, 73, 74, and 79-81 have been withdrawn and Claims 1-2, 10, 17, and 21 have been rejected over the prior art. Favorable reconsideration of this application in view of the following remarks is respectfully requested.

Rejections under 35 U.S.C. §103

a. The Official Action rejected Claims 1-2, 17, and 21 under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 2002/0062834 to Snaidr et al. ("Snaidr") in view of U.S. Patent Application Publication No. 2002/0179106 to Zawadzki et al. ("Zawadzki") and further in view of U.S. Patent Application Publication No. 2003/0000538 to Bereman ("Bereman").

Specifically, the Official Action alleges

Snaidr does not expressly disclose the concentration gradient of catalyst between two portions along the length (distal and proximal) of the cigarette. Zawadzki discloses a cigarette paper with discrete portions along the length (distal and proximal) that can be treated with titanium oxide (22, fig. 1 and claims 99-100) creating a gradient between a low concentration portion and a high concentration portion along [sic] the cigarette. Furthermore, Bereman discloses using metallic or carbonaceous particles to remove harmful substance from smoking a smoking article (Abstract) and the need for alterations in the concentration of the metallic or carbonaceous particles to compensate for reactions of additional components with the metallic or carbonaceous particles. The reference of Bereman suggests the needs for applying different concentrations of catalyst material in a smoking article to compensate for reactions with other additional materials (paragraph 110). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Bereman to the smoking article of Snaidr to vary the

concentration of the catalyst along the wrapper as needed.
(Official Action at page 3).

Independent Claim 1 recites:

A smoking article comprising:
a tobacco rod having a wrapper formed around the tobacco rod, the wrapper including a patterned deposit on at least a portion of one surface of the wrapper,
wherein the patterned deposit comprises catalyst particles capable of catalyzing, oxidizing and/or reducing the conversion of a constituent gas component in the mainstream and/or sidestream smoke of the smoking article, and wherein the patterned deposit includes a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the wrapper.

Snaidr is cited for disclosure of a low sidestream smoke cigarette including a combustible treatment paper having a sidestream smoke treatment composition including an oxygen storage and donor metal oxide oxidation catalyst (Abstract). The sidestream smoke treatment composition may be applied to one or both sides of cigarette paper to virtually eliminate sidestream smoke (paragraphs [0065] and [0072]). However, Snaidr fails to disclose a patterned deposit including a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the wrapper.

Zawadzki is cited for disclosure of a smoking article having reduced ignition propensity. (Abstract). The smoking article includes a wrapper having untreated areas alternating with treated areas. (Paragraph [0031]). However, Zawadzki fails

to disclose a patterned deposit including a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the wrapper.

Bereman is cited for disclosure of the altering of concentration of metallic or carbonaceous particles, the nitrate or nitrite source, and/or the additional components. (Paragraph [0110]). However, Bereman fails to disclose a patterned deposit including a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the wrapper.

Under 35 U.S.C. § 103(a), the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. M.P.E.P. § 2142. As set forth in M.P.E.P. § 2143, one requirement for establishing a *prima facie* case of obviousness is that the combination of references must teach or suggest all the claim features [Emphasis Added]. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 1 is patentable over the references as combined because Snaidr in view of Zawadzki and Bereman fails to teach or suggest a patterned deposit including a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the

wrapper as recited in Claim 1. As acknowledged in the Official Action, Snaird does not expressly disclose the concentration gradient of catalyst between two portions along the length. (Official Action at page 3). Zawadzki is cited for disclosure of creating a gradient between a low concentration portion and a high concentration portion along a cigarette. However, Zawadzki is silent as to the creation of such a gradient. Moreover, Bereman is cited for disclosure of altering of the concentration of metallic or carbonaceous particles, the nitrate or nitrite source, and/or the additional components, but there is no teaching or suggestion to create a concentration gradient within a single smoking article. Thus, the references as combined fail to teach or suggest all features recited in Claim 1 including a patterned deposit including a concentration gradient of the catalyst between a first portion having a low concentration feature and a second portion having a high concentration feature, wherein the first portion and the second portion respectively are a linearly distal portion and a linearly proximate portion of the wrapper with respect to an end of the wrapper.

Claims 2, 17 and 21, which depend from Claim 1, are also patentable for at least the reasons Claim 1 is patentable.

b. The Official Action rejected Claim 10 under 35 U.S.C. §103(a) as allegedly unpatentable over Snaird in view of Zawadzki and Bereman as applied to claim 1 above and further in view of U.S. Patent No. 3,636,027 to Smith ("Smith").

Specifically, the Official Action alleges

Snaird does not disclose the oxide catalyst is supported. Smith discloses a catalyst system can be self supported or deposited on a support or carrier for dispersing the catalyst system to increase its effective surface. Calcium carbonate is one of the useful compound [sic] as carrier

(column 7, lines 49-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to support the catalyst on a compound such as calcium carbonate to increase its effective surface as taught by Smith. (Official Action at page 4).

Smith is cited for disclosure of a catalyst system that can be self-supported or deposited on a support or carrier such as calcium carbonate. (Col. 7, lines 49-55).

Claim 10 is patentable over the references as combined for at least the reasons Claim 1 is patentable and because Smith fails to remedy the deficiencies of Snaidr, Zawadzki and Bereman.

Conclusion

In view of the foregoing, it is submitted that all claims are in condition for allowance. Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contacted at the number indicated below.

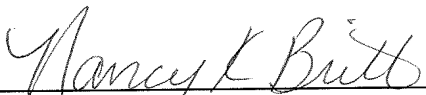
The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: June 20, 2011

By:



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